

## REMARKS

Claims 1-15 are pending in the application. Claim 1 is currently amended.  
Claims 1-15 are rejected. No new matter is added.

### Claim Rejections Under 35 U.S.C. § 102

Claims 1-4, 6, 10 and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent 4,107,244 (Ochiai). Applicants respectfully traverse the rejection of the claims. Applicants have amended claim 1 from which all other claims depend to such that applicants invention is directed to a method for repairing a protective lining which comprises the step of combining isolated areas of the lining having a thickness below the pre-determined threshold value into adjacent combined areas of the lining which are assigned the same binary value as for areas of the lining have a thickness below the predetermined threshold value.

On page 3 of the Office Action it is stated that each position is an individual "isolated area" and that the sum total of these positions is the "combined isolated area" allegedly as according to applicants claim 1 and that therefore the claim is anticipated by Ochiai. Applicants respectfully disagree.

It is submitted that Ochiai simply does not teach the claimed feature of combining isolated areas of the lining having a thickness below the pre-determined threshold value into adjacent combined areas of the lining and assigning the same binary value to the adjacent combined areas as for areas of the lining that have a thickness below the predetermined threshold value. Ochiai does not teach this step but rather repair by the method in Ochiai simply begins on the target surface after the step of measuring the thickness of the lining on the surface. Therefore, the system in Ochiai repairs many area which do not need to be repaired resulting in much unnecessary work and needless waste of time.

In stark contrast, because applicants system according to claim 1 combines isolated areas needing repair into adjacent combined areas as seen in Fig. 3 of the present application, repair of the surface is completed in a much shorter time. This process step of defragmentation is described in paragraph 19 of the present application.

Therefore, it is submitted that the rejected claims 1-4, 6, 10 and 11 are not anticipated by Ochiai because at least one claimed feature is not present in the cited reference as stated above. Reconsideration of the rejected claims 1-4, 6, 10 and 11 and their allowance are respectfully requested.

**Claim Rejections Under 35 U.S.C. § 103(a)**

Claims 5 and 7 are rejected as being unpatentable over Ochiai as applied to claim 4 (for claim 5) or claim 6 (for claim 7). Applicants respectfully traverse the rejection of the claims.

In the rejection on page 5 it is stated that claims 5 and 7 which depend from claim 1 are rendered obvious by Ochiai. In the rejection the examiner admits that Ochiai is silent as to whether a ladle is being repaired in the Ochiai reference and whether Ochiai discloses using a laser-based measuring device. It is then stated that one of ordinary skill in the art would use the operation of Ochiai to repair ladles and use a mirror scanner. Applicants submit that in view of the above modifications of the Ochiai reference one of ordinary skill in the art still would not have arrived at applicants invention as the combination still lacks the claimed feature of a step of combining isolated areas into adjacent combined areas which are assigned a binary value the same as the isolated areas.

Therefore, applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claims 5 and 7. Applicants respectfully traverse the rejection of the claims.

Claims 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ochiai as applied to claim 1 in view of US Patent 4,690,328 (Roehl). Applicants respectfully traverse the rejection of the claims.

In the rejection on page 6, the Roehl reference has been combined with the Ochiai reference on the grounds that Roehl allegedly teaches a tilting mechanism for a device applying refractory material and a spray nozzle. Applicants submit that in view of the above modifications of the Ochiai reference by the Roehl reference one of ordinary skill in the art still would not have arrived at applicants invention because the above claimed feature of a step of combining isolated areas into adjacent combined areas which are assigned a binary value the same as the isolated areas is still not present in the combination.

Therefore, applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claims 8 and 9.

Claims 12-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ochiai as applied to claim 1 and in view of US Patent Application Publication 2002/0158368 Wirth. Applicants respectfully traverse the rejection of the claims.

In the rejection on page 7, the Wirth reference has been combined with the Ochiai reference on the grounds that Wirth allegedly teaches a rectangular or cylindrical coordinate system. Applicants submit that in view of the above modifications of the Ochiai reference by the Wirth reference one of ordinary skill in the art still would not have arrived at applicants invention because the above claimed feature of a step of combining isolated areas into adjacent combined areas which are assigned a binary value the same as the isolated areas is still not present in the combination of references.

Therefore, applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claims 12-15.

## **CONCLUSION**

The amendments presented herein are fully supported by the disclosure as originally filed and no new matter has been added. Applicant believes that the pending claims as amended are in condition for allowance. Should Examiner not agree with Applicants' position, then a telephone interview is respectfully requested to discuss any remaining issues and expedite the eventual allowance of the application.

Respectfully submitted,

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